

SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 749 Const Calendar Day: 207 Date: 28-Dec-2012 Friday Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Continuous

Shift Hours: 07:00 am 03:30 pm **Break:** 00:30 Over Time:

Federal ID: Location:

Reviewer: Status: Submit Schmitt, Alex Approved Date:

Weather

Temperature 7 AM 50 - 60 **12 PM** 50 - 60 4PM 50 - 60

Precipitation 0.30" Condition Light rain in AM to mostly overcast and windy

Working Day | If no, explain:

Dispute Diary:

Work description.

- Took local measurements of the two E-Line Hinge A pipe beams from 8:30am to 9:45am. The ambient temperature wasn't taken however the steel temperature was 44F on the top deck at EPP125CL under overcast skies. This indicates that the SAS and Skyway have likely not moved even though the sunrise is around 7:20am. A laser level was used from the top of the pipe where the stiffeners in the pipe were measured in relation to west diaphragm A stiffener plate. The center of diaphragm A was measured in the access opening adjacent to the Hinge A pipe beam.

The following are the measurements taken on the E-Line Hinge A pipe beam longitudinal position:

Measurement near Diaphragm A	South Pipe Beam	North Pipe Beam	
Laser line to east pipe stiffener east face:	1437	1356	

Laser line to west pipe stiffener west face: 776 836

Center of pipe stiffeners - 25mm offset laser line: (1437 - 836) / 2 + 836 - 25 = 1112

(1356-776) / 2 +776 -

25 = 1041

West face of west diaphragm A plate to laser line: 609 526

Diaphragm A opening west/east faces: 1042 1036

Center of Diaphragm A opening - 25mm offset laser line: 609 + (1042 / 2) - 25 = 1105

526 + (1036 / 2) - 25

= 1019

22 -West Center of Pipe Beam to be aligned over diaphragm A needs to go: 7 - West

From 10:00am to 11:10am measurements were taken with ABF engineer Andre Makaranian to agree on the longitudinal location of the E-Line Hinge A pipe beams. His measurements were done from the



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Run date 21-Nov-14

04-0120F4

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Self-Anchored

Suspension Bridge

Time 10:49 PM

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diaphragm A bearing shoes to the end of the pipe. The initial measurements were based off of theoretical values for the pipe stiffeners and the shoes. I informed Andre that I was taking actual measurements of the pipe beam stiffener plates at diaphragm A. We agreed on the location for the South pipe beam within a few millimeters. However we disagreed on the North pipe beam location by approximately 15mm.

According to Andre the grout along the E-Line didn't have enough compressive strength to remove the strongbacks today. Therefore myself and Andre agreed to take another look at the longitudinal measurements prior to the strongback removal. It was discussed that even if the North E-Line pipe was not moved that the location of the pipe stiffeners were within the bearing shoe and able to transfer the load sufficiently to the Hinge A diaphragm.

sufficiently t	o the Hinge	A dia	ohragm.							
04-0120F4	Bid Item:	034	X-W2C-GV	/R.034	E-W Line	Cross O	ver W2 (Cap Str	ress & Grout Vertical Rods	
SCHWAGER DA	AVIS INC.									
Labor										
Trade	Class		Name		RT Hrs	OT Hrs	DT Hrs	Total	Remarks	Dispute
Contractor:	SCHWAGER D	AVIS INC	D.							
Ironworker	JNM		James Bond		2.00	0.00	0.00	2.00		
Ironworker	JNM		ARMANDO JAIME	E	8.00	0.00	0.00	8.00		
Diary:										Dispute
Work desc	ription.		034	X-W2	C-GVR.03	34				
- Were onsite to clean the excess grout from the short vertical PT bars that drained onto the Hinge K pipe beam boxes and the W2E west deviation saddle. Myself, ABF engineer Levi Gatsos, and SDI superintendent James Bond discussed the remaining work by the subcontractor on the SAS. These items included cleanup of the grout on the Hinge K pipe beam boxes, short vertical PT bar grouting punchlist and stressing/grouting of transverse tendons CBT 1-10. As previously mentioned in other diaries and emails SDI had to grout some of the short vertical PT bars multiple times in an attempt to clear the residual water inside of the blockout. Currently there are 23/56 or 41% of the blockouts where water may be entrapped inside of the blockout. This may cause corrosion if there is indeed some residual water inside of the blockout. To be clear all attempts were made to properly grout these bars however I can't say without 100% certainty that every bit of water was cleared from the blockouts prior to encasing or sealing with grout. However James and Levi agreed to fill the empty grout tubes with grout when SDI returns to the jobsite. There are 8 bar blockouts where the grout tube isn't filled to the top which would reduce the number of blockouts with potential entrapped residual water reduced to 15 or 27%.										
04-0120F4	Bid Item:		C-PWS-HD	DR.067	Install Har	d Rope				
AMERICAN BRI	DGE/FLUOR, A	\ JV								
Labor Trade	Class		Name		DT Hrs	OT Hre	DT Hre	Total	Remarks	Dispute
Contractor:	AMERICAN BRI				KT HIS	O1 1118	DI IIIS	ivial	Nemarks	Dispute
			1005 11 5100					40.00		

	AWIERICAN BRIDGE/FEOOR, A 3 V									
	Labor									
	Trade	Class	Name	RT Hrs	OT Hrs	DT Hrs	Total	Remarks	Dispute	
Contractor: AMERICAN BRIDGE/FLUOR, A JV										
	Ironworker	JNM	JOSE ALFARO	8.00	2.00	0.00	10.00			
	Ironworker	JNM	RENE ESQUIVEL	8.00	2.00	0.00	10.00			
	Ironworker	APP	ETHAN KENT	8.00	2.00	0.00	10.00			
	Ironworker	JNM	STANLEY DALIE	8.00	2.00	0.00	10.00			
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Diary:

Work description. 067 C-PWS-HDR.067

- Completed fastening the South Mainspan handrope clamp bolts to a 1/3 turn or a torque of 302N-m. Also torqued the outboard Crosby clip U-bolt nuts to 225lb-ft on the South Mainspan as well. The crew consisted of Stanley, Ethan, Jose, and Rene where the ironworkers started on this task first thing today and were done around 2:00pm. After this task the crew worked on suspender rope bracket cover plates for

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the rest of the day. See Abbas Iranmanesh's diary for more details of this operation as he was responsible for that inspection.

Myself and Smith Emery technician Brien Connelly proceeded to test the handrope clamp bolts after the ironworkers were approximately 2/3s complete. Thirteen of the bolts failed the torque wrench test from panel points EPP46 progressing downhill to EPP80. After the failed bolts were identified with a blue marker Ethan and Jose went down the span with Brien and myself and applied the proper torque to the bolts.

After all of the handrope clamp bolts were properly torqued and tested I verbally informed ABF engineer Ankur Singh that the torque applied to the bolts from EPP46 to EPP100 were acceptable. Also it should be noted that as the ironworkers were torquing the handrope clamp bolts there was a slight twist in the handrope cables. Ethan removed the twist by turning the turnbuckles. The amount of turns on the turnbuckle and the sections of clamped handrope likely held the tension force of 45,000kN. However the handrope tensions should be checked again for acceptance.

Attachment



Steel temperature after my independent QA measurements were taken on the Hinge A E-Line pipe beams on the top deck plate at EPP125CL.



Measurement from the west face of the west diaphragm A stiffener plate near the South pipe beam using the laser level attached to the pipe.